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Mauro Sentinelli

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EXAMINER

ZIA, SYED

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,087	<b>Applicant(s)</b> SENTINELLI, MAURO	
	<b>Examiner</b> SYED ZIA	<b>Art Unit</b> 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 33-51 and 53-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33,35-45,47-49,51,53,54 and 56-62 is/are rejected.
- 7) ☒ Claim(s) 34,46,50 and 55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

This office action is in response to remarks filed on August 13, 2010. Claims 33-51 and 53-62 are pending.

### ***Allowable Subject Matter***

Claims 34, 46, 50 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and also subject to overcoming 101 rejection as discussed below.

### ***Response to Arguments***

Applicant's arguments filed on August 13, 2010 have been fully considered but they are not persuasive because of the following reasons:

Regarding Claims 33-51 and 53-62 applicants argued that the cited prior arts (CPA) [Alie (U. S. Publication No.: 2003/0055738)] Alie does not disclose at least the following claim elements recited in claim 33: performing **a first, SIM-based authentication** of the user's data processing terminal in the data processing system at an authentication data processing server, said performing the SIM-based authentication comprising operatively associating with the user's data processing terminal **a first subscriber identity module** issued to the data processing terminal user; conditioning the authentication of the user's data processing terminal in the data processing system to **a second authentication**, said second authentication being based on

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identification information provided to the user at the mobile communication terminal through the mobile communication network **using a second subscriber identity module**. (Emphases added, independent claims 44, 48, 53, and 60 containing similar recitations.

This is not found persuasive. The system of cited prior art teaches mobile transaction device that has smart card with encryption keys and calculates response using ID code (**a first subscriber identity module**), transaction value and challenge. This personal mobile device comprises means for receiving information related to a transaction (**a first, SIM-based authentication**) and sending a response, a hardware secure module (smart card) with encryption keys for processing information and calculating the response, an interface for displaying information and prompting the end user for the identification code (PIN) and means for inputting the identification code (**using a second subscriber identity module**) and approving the transaction (**a second authentication**). The transaction information includes a challenge value, a label containing context information and a numerical value.

Specifically, the present invention consists of a system and method for effecting transactions with strong multi-factor end user authentication, using personal mobile devices.

This system includes the authentication server side processing of the transaction request. The authentication server sends the request information to its own Hardware Security Module (HSM) to obtain a derived challenge value (a non-predictable number) which is attached to a label containing context information as well as a numerical value pertaining to the transaction (transaction value, transaction number, or other), so that the transaction is uniquely identified

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This system further consists of the procedure implemented by the personal mobile device (e.g. a personal digital assistant or a mobile handset), including its own hardware security module (HSM), to calculate and send back a response (signature). At the personal mobile device, the elements sent by the server are transferred to and processed by the HSM. If the personal mobile device has a direct connection, e.g. through a wireless link, to the server then the transfer of all elements is automatic. If it has an indirect connection, for example the information is shown on a personal computer display, the user must manually transfer two of the three elements (i.e. the challenge and the transactional value) using the personal mobile device input capability. The personal mobile device displays the information relating to the transaction, such as the value, and prompts the person for a PIN. The HSM uses the PIN, the transaction value, the challenge, and encryption keys to calculate a response. The response is sent to the server, automatically or manually depending on the type of the connection with the server ([Fig.2-7, and 0010-0018, 0048-0041, and 0070-0096]).

As a result, cited prior art does implement and teach a system that methods that relates to authenticating users of data processing systems using SIM based authentication involving an exchange of identification data stored on a Subscriber Identity Module.

Therefore, the examiner asserts that cited prior art does teach or suggest the subject matter broadly recited in independent Claims and in subsequent dependent Claims. Accordingly, rejections for claims 33, 35-45, 47-49, 51, 53, 54 and 56-62 are respectfully maintained.

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claim 47 and 51 are rejected under 35 USC 101 since the claims are directed to non-statutory subject matter. Claims 47 and 51 are directed towards a computer readable medium including code stored thereon which appears to cover both transitory and non-transitory embodiments. The specification on paragraph 0053 recites that “a computer readable storage media”, but no specific definition is provided to define this claimed term. The United States Patent and Trademark Office (USPTO) is required to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zletz*, 893 F.2d 319 (Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media **and** transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim **must** be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. *See In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter)

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and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 24, 2009; p. 2.

2. The Examiner suggests that the Applicant add the limitation “non-transitory computer-readable medium “to the claim(s) in order to properly render the claims in statutory form in view of their broadest reasonable interpretation in light of the originally filed specification. The examiner also suggests that the specification be amended to include the term “non-transitory computer-readable medium” to avoid a potential objection to the specification for a lack of antecedent basis of the claimed terminology.”

2. Claims 60-62 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

3. Claims 60-62 recite, authentication kit, which is interpreted as software per se, however, the claims fail to assert the program recorded on an appropriate computer-readable medium so as to be structurally and functionally interrelated to the medium and permit the function of the descriptive material to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer without a computer-readable medium needed to realize the computer program’s functionality, it is regarded as nonstatutory functional descriptive material. See MPEP 2106.01 for details.

3. Examiner notes that the use of word kit in the preamble does not inherently mean that the claim is directed towards a machine or hardware. At least one claimed within the claim language needs to positively indicate that it is a physical part of the apparatus. In the claim language cited

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above elements such as “an authentication kit for authenticating a user's data processing terminal...”, can be considered as software elements because claim language does not disclose a hardware entity upon which these elements reside on or they themselves being hardware elements, performing these functions. Therefore claims 60 and 62 are directed towards software per se and is rejected under 35 U.S.C 101.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 33, 35-45, 47-49, 51, 53-54 and 56-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Alie (U. S. Publication No.: 2003/0055738).

1. Regarding Claim 33 Alie teaches and describes a method of authenticating a data processing terminal of a user for granting the data processing terminal access to selected services provided by a data processing system, the user being provided with an authenticatable mobile communication terminal adapted to be used in a mobile communication network[0058-0061], comprising:



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performing a first, SIM-based authentication of the user's data processing terminal in the data processing system at an authentication data processing server, said performing the SIM-based authentication comprising operatively associating with the user's data processing terminal a first subscriber identity module issued to the data processing terminal user [0072-0075];

having the user's mobile communication terminal authenticated in the mobile communication network [0077]; and

conditioning the authentication of the user's data processing terminal in the data processing system to a second authentication, said second authentication being based on identification information provided to the user at the mobile communication terminal through the mobile communication network using a second subscriber identity module (secret i.e. PIN) ([0078-0081]).

2. Regarding Claim 44 Alie teaches and describes a method by which a data processing terminal in a data processing system is authenticated in order to be granted access to selected services provided by the data processing system [0058-0061], the method comprising:

interacting with a first user's subscriber identity module (SIM) operatively associated with the data processing terminal, and with an authentication data processing server in the data processing system, for performing a SIM-based authentication of the user's data processing terminal [0072-0075];

acquiring personal identification information provided to the user at a user's mobile communication terminal for second authentication, wherein the second authentication is through a mobile communication network using a second subscriber identity module; and sending said

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personal identification information to the authentication data processing server for completing the authentication of the data processing terminal (secret i.e. PIN) ([0077-0081]).

3. Regarding Claim 48 Alie teaches and describes a method by which an authentication data processing server authenticates a user's data processing terminal in a data processing system in order to grant the data processing terminal access to selected services provided by the data processing system [0058-0061, comprising:

receiving a request of authentication of the data processing terminal, the data processing terminal having operatively associated therewith a first subscriber identity module; performing a SIM-based authentication of the data processing terminal based on data associated with the first subscriber identity module [0072-0075];

providing the user with first personal identification information by exploiting a user's mobile communication terminal authenticated in a mobile communication network [0077]; and

conditioning the authentication of the user's data processing terminal to a prescribed correspondence between the first personal identification information provided to the user and second personal identification information received from the user's data processing terminal through the mobile communication network using a second subscriber identity module in reply to the provision of the first personal identification information (secret i.e. PIN) ([0078-0081]).

4. Regarding Claim 53 Alie teaches and describes in a data processing system, a system for authenticating a data processing terminal of a user so as to grant the data processing terminal access to selected services provided by the data processing system, the user having an

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authenticatable mobile communication terminal adapted to be used in a mobile communication network [0058-0061], comprising:

a first subscriber identity module operatively associatable with the data processing terminal; and an authentication data processing server adapted to carry out a first authentication step based on the first subscriber identity module [0072-0075];

the authentication data processing server being further adapted to carry out a second authentication process based on identification information provided to the user at the mobile communication terminal through the mobile communication network using a second subscriber identity module (secret i.e. PIN) ([0077-0081]).

5. Regarding Claim 60 Alie teaches and describes an authentication kit for authenticating a user's data processing terminal in a data processing system in order to grant the data processing terminal access to selected services provided by the data processing system [0058-0061], comprising:

a first subscriber identity module; a computer peripheral device having associated therewith the first subscriber identity module and operatively associatable with the user's data processing terminal [0072-0075]; and

a second subscriber identity module operatively associated with a user's mobile communication terminal for allowing connection thereof to a mobile communication network (secret i.e. PIN) ([0077-0081]).

6. Regarding Claim 62 Alie teaches and describes an authentication kit for authenticating a

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user's data processing terminal in a data processing system in order to grant the data processing terminal access to selected services provided by the data processing system [0058-0061], comprising:

a first subscriber identity module; a computer peripheral device having associated therewith the first subscriber identity module and operatively associatable with the user's data processing terminal [0072-0075];

a second subscriber identity module operatively associated with a user's mobile communication terminal for allowing connection thereof to a mobile communication network; and the computer program product of claim 47 or 51 (secret i.e. PIN) ([0077-0081])

4. Claims 35-43, 45, 47, 49, 51, 54, 56-59 and 61 are rejected applied as above rejecting Claims 33, 44, 48, 53, and 60. Furthermore, Alie teaches and describes data dependent scrambler, wherein:

As per Claim 35, comprising having the user entering the second password through the data processing terminal ([0010-0018]).

As per Claim 36, the second password is entered automatically upon receipt of the first password at the user's mobile communication terminal ([0070-0076]).

As per Claim 37, said first password is usable a limited number of times, or one time only ([0070-0076]).

As per Claim 38, comprising issuing to the user a second subscriber identity module adapted to be used in the user's mobile communication terminal for authentication thereof in the mobile communication network ([0010-0018]).

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As per Claim 39, the second subscriber identity module has a fixed, one-to-one relationship with the first subscriber identity module ([0070-0076]).

As per Claim 40, the first subscriber identity module is associated with an identifier of the second subscriber identity module, or a mobile communication terminal number ([0070-0096]).

As per Claim 41, said identification information is sent to the user's mobile communication terminal by way of a short message service message ([0070-0096]).

As per Claim 42, said first subscriber identity module is of a type adopted in mobile communication networks for authenticating mobile communication terminals ([0010-0018]).

As per Claim 43, said performing the first, SIM-based authentication of the data processing terminal comprises having the first subscriber identity module authenticated by an authentication server of the data processing system, the authentication server acting substantially as an authentication center of a mobile communication network operator ([0070-0096]).

As per Claim 45, in which the first subscriber identity module is of a type adopted in mobile communication networks for authenticating mobile communication terminals ([0010-0018]).

As per Claim 47, a computer-readable medium encoded with a computer program product directly loadable into a working memory of a data processing terminal, the computer program product comprising software code portion capable of performing, when executed, the method according to claim 44 ([0054-0068]).

As per Claim 49, the first subscriber identity module is of a type adopted in mobile communication networks for authenticating mobile communication terminals, the authentication

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data processing server acting substantially as an authentication center of a mobile communication network operator ([0054-0068]).

As per Claim 51, a computer-readable medium encoded with a computer program product directly loadable into a working memory of an authentication data processing system, the computer program product comprising software code portion capable of performing, when executed, the method according to claim 48 ([0054-0068]).

As per Claim 54, the first subscriber identity module is of a type adopted in mobile communication networks for authenticating mobile communication terminals ([0010-0018]).

As per Claim 56, the second subscriber identity module is in a fixed, one-to-one relationship with the first subscriber identity module ([0070-0076]).

As per Claim 57, the second subscriber identity module is associated with an identifier of the second subscriber identity module, particularly a mobile communication terminal number ([0070-0076]).

As per Claim 58, said first subscriber identity module is associated with a device connectable to the computer through a computer peripheral connection port ([0010-0018]).

As per Claim 59, said mobile communication network is one among a GSM, a GPRS, and a UMTS network ([0070-0096]).

As per Claim 61, the first subscriber identity module is of a type adopted in mobile communication networks for authenticating mobile communication terminals ([0010-0018]).

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SYED ZIA whose telephone number is (571)272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ

October 20, 2010

/Syed Zia/

Primary Examiner, Art Unit 2431